

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number  
**WO 2005/068176 A1**

(51) International Patent Classification<sup>7</sup>: **B32B 3/10**, 3/12, 3/20, 3/24, 3/26, 3/28, 3/30, 5/26, 5/28, 15/02, 15/14, F41H 1/02, 5/04

(21) International Application Number:  
PCT/AU2004/001004

(22) International Filing Date: 29 July 2004 (29.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004900201 19 January 2004 (19.01.2004) AU

(71) Applicant (for all designated States except US): **ELACO PTY LTD** [AU/AU]; Creeda Business Centre, 2 Lansell Crt, Wanniassa, ACT 2903 (AU).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MUSAEFENDIC, Jasko** [AU/AU]; 3/3 Peter Street, Grovedale, VIC 3216 (AU).

(74) Agent: **HENSHAW, Damon**; Davies Collison Cave, 1 Nicholson Street, Melbourne, VIC 3000 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

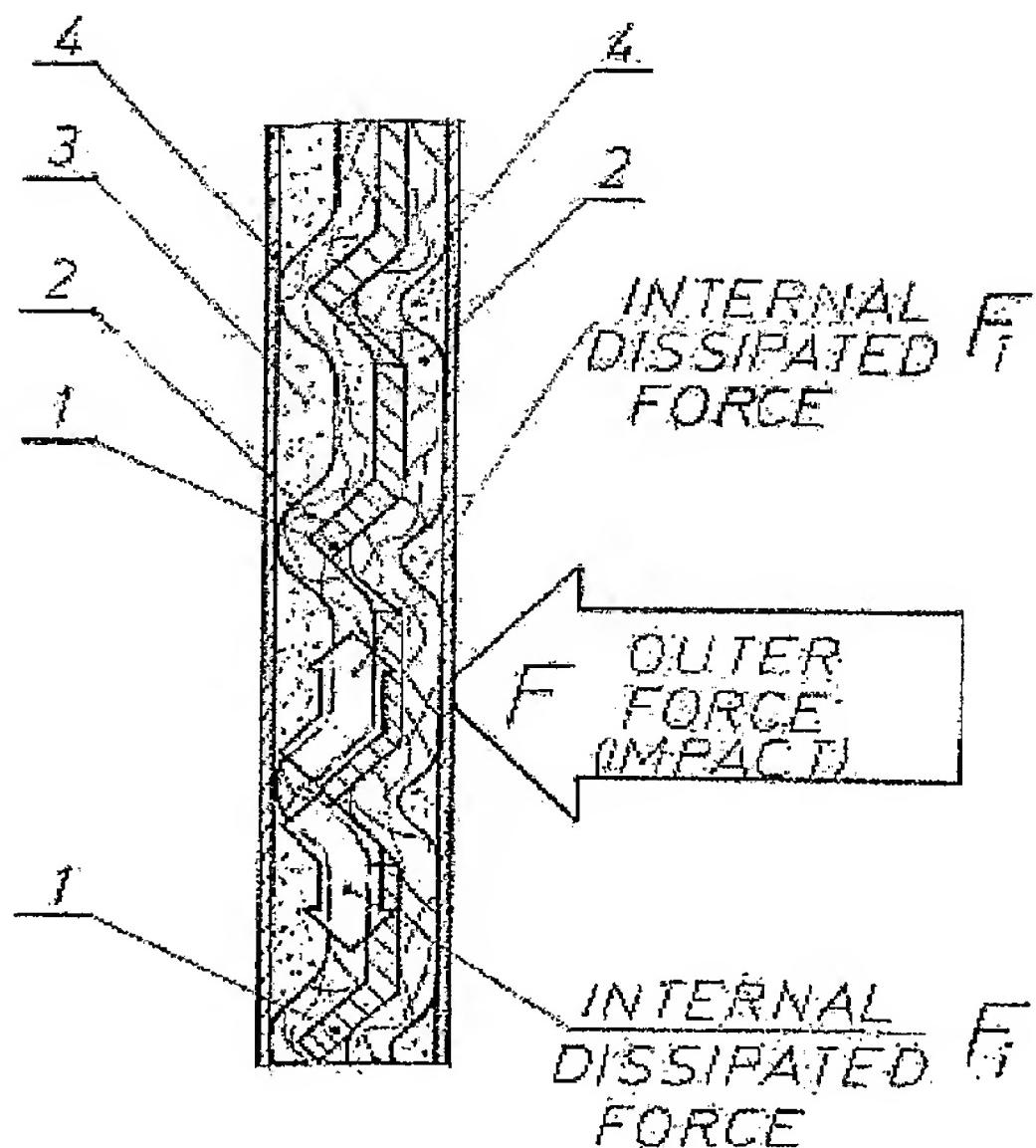
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HIGH IMPACT STRENGTH, ELASTIC, COMPOSITE, FIBRE, METAL LAMINATE



WO 2005/068176 A1

(57) Abstract: A damage resistant, high impact strength, elastic, composite, fibre, metal laminate structure, having (4) first and (4) second outer face layers (2) first and (2) second plies being located between the first and second outer layers, (1) a dissipating element located between the first and second plies, wherein the dissipating element is adapted to dissipate and redirect, randomly directed local active loading applied to at least one of the two outer surfaces, to loading directed in the longitudinal axis (tensile) of the first and second ply; and a polymer matrix between (2) and (4).